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## Santa Ana Regional Water Quality Control Board

January 8, 2020

Scott Maloni  
Poseidon Water  
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### TENTATIVE ORDER R8-2020-0005: ADDITIONAL INFORMATION REQUEST

Dear Mr. Maloni:

As you are aware, the Santa Ana Regional Water Quality Control Board (Santa Ana Water Board) conducted a Public Workshop on December 6, 2019 at which staff from the Santa Ana Water Board and State Water Resources Control Board (State Water Board) provided an overview of the tentative NPDES Order R8-2020-0005 and draft Water Code section 13142.5(b) determination for the proposed Poseidon Huntington Beach desalination facility. At the workshop, the Santa Ana Water Board heard public comments and asked the Santa Ana Water Board staff to provide additional information related to the proposed Water Code section determination, including information on the identified need for the desalinated water (California Ocean Plan, Chapter III.M.2.b.(2)).

To address the questions and issues raised on identified need, please provide documentation (including documentation from the relevant water planning agencies) to Santa Ana Water Board staff that answers the following questions. Please note that Santa Ana Water Board staff has reviewed the previous submittals from Poseidon and expects Poseidon to submit new documentation and information to address these questions. If previously submitted documentation is cited, please identify the specific appendix and the specific pages/paragraphs being cited.

1. Poseidon Water has proposed to produce 50 million gallons per day (MGD) of desalinated water. To produce this amount of water, Poseidon Water will need to withdraw 107 MGD of seawater. If the proposed project withdrew a volume less

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than the proposed 107 MGD of seawater and produced less desalinated water, there would be a reduction in the intake and mortality of marine life.

*Questions: Why didn't Poseidon Water consider or propose a volume of product water less than the proposed 50 MGD? The documentation previously submitted by Poseidon Water does not specify why 50 MGD is needed. Please provide justification and documentation to support the specific need for the proposed 50 MGD of desalinated water and not a lesser amount (e.g., 20 MGD or less).*

2. The Santa Ana Water Board heard comments from some of the Orange County Water District (OCWD) board members that there is a need for the desalinated water as documented in OCWD's Groundwater Management Plan, and they stated it would be used as the source water for the existing and the planned 30 MGD expansion of the Groundwater Replenishment System. However, there were also comments from the public, one OCWD Board member and the Irvine Ranch Water District (the largest retail water agency in Orange County) that countered OCWD's position on the need for the desalinated water. These commenters raised the concern that there is no shortage of water, the recharge into the groundwater basin is at its capacity, there are other more cost-effective projects, and there have not been any water agencies, besides OCWD, agreeing to purchase the water. Because OCWD has not yet finalized their distribution plans for the desalinated water, it is uncertain where the desalinated will be utilized which has raised questions with board members as to whether the need for the desalinated water has been sufficiently identified.

*Questions: What are OCWD's plans for distribution of the desalinated water and when are those plans to be finalized? If OCWD plans on injecting the desalinated water into the Orange County Groundwater Management Zone, where would that occur and are there any constraints for injection of the proposed 50 MGD (e.g., no capacity for recharge if the groundwater management zone is sufficiently recharged during wet years, consideration of the potential for recharge in areas where groundwater contamination is present). Given any identified constraints, could a lesser amount be injected and avoid these constraints?*

*If the desalinated water is injected and withdrawn for potable reuse, what additional treatment would need to occur prior to distribution*

3. Santa Ana Water Board staff's tentative determination was that the identified need was consistent with the 2015 Municipal Water District of Orange County (MWDOC) Urban Water Management Plan (UWMP)<sup>1</sup>; however, some of the Santa Ana Water Board members were concerned that this does not appear to

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<sup>1</sup> Tentative Order R8-2020-0005, Attachment G, Finding 7 and Attachment G.2.

be consistent with the recent 2018 MWDOC Reliability Study. In the 2018 MWDOC Reliability Study, the Poseidon Water desalination project ranked last among local Orange County water projects primarily because the desalinated water appears to be the most expensive water compared to other water sources and produces more water than the estimated short fall of water supply needed in the future.

*Questions: Given the 2018 MWDOC Reliability Study, please provide justification that there remains a need for the project despite the project's low ranking and the availability of other local water projects that would minimize impacts to all forms of marine life. Also, given what appears to be a conflict in the position of OCWD and the MWDOC Reliability Study, please clearly and succinctly identify the roles and relationship between MWDOC and OCWD.*

4. In accordance with Santa Ana Water Board Resolution R8-2019-0078, the Board will consider the human right to safe, affordable, and clean water when permitting projects. As noted in #3, the cost for desalinated water is more expensive than other sources, and the cost could affect the decision to proceed with the project. The Santa Ana Water Board heard numerous comments related to the cost of the project's desalinated water in connection with the human right to water. In addition, OCWD's board members also stated at the workshop and in their August 8, 2019 letter to Governor Newsom that OCWD is sensitive to cost increases and operating restrictions associated with the facility.

*Questions: Because the cost of water is a concern and knowing this would be a large local water supply for Orange County, what will be the costs to consumers of the proposed 50 MGD Poseidon Water project? Please provide a breakdown of capital costs (distribution lines, etc.), permitting costs, and O&M costs, that will be passed on to consumers. Provide this cost information as a comparison for both existing costs to rate payers and the incremental and total cost increase if the proposed Poseidon Water facility is approved. In addition, include specific cost impacts to disadvantaged communities or environmental justice communities.*

*Please explain why OCWD is supportive of the proposed desalination project that may result in increased consumer costs compared to other sources of water? Provide information to show what communities in the OCWD service area would potentially expect to see water rate increases and which areas will not have rate increases due to the proposed project.*

*Are there specified cost increases or operational restrictions that OCWD has identified that could affect their decision to purchase the Facility's water supply?*

5. Poseidon and OCWD commented at the workshop that the desalinated water provides a sustainable drinking water supply to the area, by protecting the community from impacts related to drought and climate change. In Poseidon's Appendix EE – Water Demand White Paper dated May 1, 2016, page 8, there is a table that indicates that the desalinated water will be used to reduce the demand on imported water from 154,000 acre-feet per year (AFY) to 98,000 AFY. Appendix EE also lists, starting on page 13, other agencies potentially interested in the desalinated water. However, in an August 8, 2019 letter to Santa Ana Water Board staff, OCWD indicates that they continue to evaluate conveyance options for the desalinated water and one option may be to use the desalinated water as recharge water at the Talbert Barrier and for the future 30 MGD Ground Water Replenishment System (GWRS) expansion. OCWD currently injects 34 MGD of advanced treated water using 36 wells into the Talbert Barrier. The source water for the Talbert Barrier is the Orange County Sanitation District's (OCSDs) disinfected secondary treated effluent which is also a drought and climate change resistant source of water supply. Poseidon Water has previously indicated that wastewater from OCSD will not be available for comingling of the desalinated water brine because OCSD's goal to recycle 100% of its wastewater.

*Questions: Since the submittal of Poseidon's Appendix EE in 2016, there have been some changes such as the proposed use of the desalinated water and the state of the groundwater basin. Appendix EE indicates that the desalinated water would be part of the drinking water supply; however, if OCWD's plans are to use the desalinated water as recharge water, with a current demand of 34 MGD at the Talbert barrier and a future demand of 30 MGD, how will the schedules for building the desalination facility and completing the GWRS expansion coincide? Please explain how Poseidon and OCWD arrived at the conclusion that using the desalinated water at the Talbert Barrier will reduce the imported water demands, because as noted above, the current water supply for the Talbert Barrier is drought and climate resistant. Further, if the desalinated water supplants the OCSD wastewater for injection in the GWRS, then is there the new potential for comingling of the Poseidon brine with wastewater?*

*Given plans for future development of Southern Orange County desalination plant in Doheny and the proposed expansion of the Talbert Barrier, can Poseidon Water provide an update to Appendix EE? Also, please update any figures and/or data in Appendix EE that has changed to reflect the current situation.*

In order for Santa Ana Water Board staff to address the Board member's questions and move forward with finalizing the tentative order for the Santa Ana Water Board's consideration on April 3, 2020, please provide the requested information by January 17, 2020.

If you wish to discuss further, please feel to contact me at 951-782-4493. You may also Jayne Joy, Assistant Executive Officer at 951-782-3284 or you may contact Santa Ana Water Board legal counsel, Teresita Sablan at 916-341-5174.

Sincerely,

[ORIGINAL SIGNED BY]

Hope Smythe  
Executive Officer

cc: (via email)

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